

ABSTRACT

5       The invention relates to biochemical synthesis of 6-amino caproic acid from 6-aminohex-2-enoic acid compound or from 6-amino-2-hydroxyhexanoic acid, by treatment with an enzyme having  $\alpha,\beta$ -enoate reductase activity towards molecules containing an  $\alpha,\beta$ -enoate group and a primary amino group.

10       The invention also relates to processes for obtaining suitable genetically engineered cells for being used in such biotransformation process, and to precursor fermentation of 6-amino caproic acid from intermediates leading to 6-amino caproic acid.

15       Finally, the invention relates to certain novel biochemically produced compounds, namely 6-aminohex-2-enoic acid, 6-aminohexanoic acid, as well as to caprolactam produced therefrom and to nylon-6 and other derivatives produced from such biochemically produced compounds or caprolactam.